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ARM as an Enabler For HPC Co-Design

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AppliedMicro Discussion of ARM 64-bit in HPC
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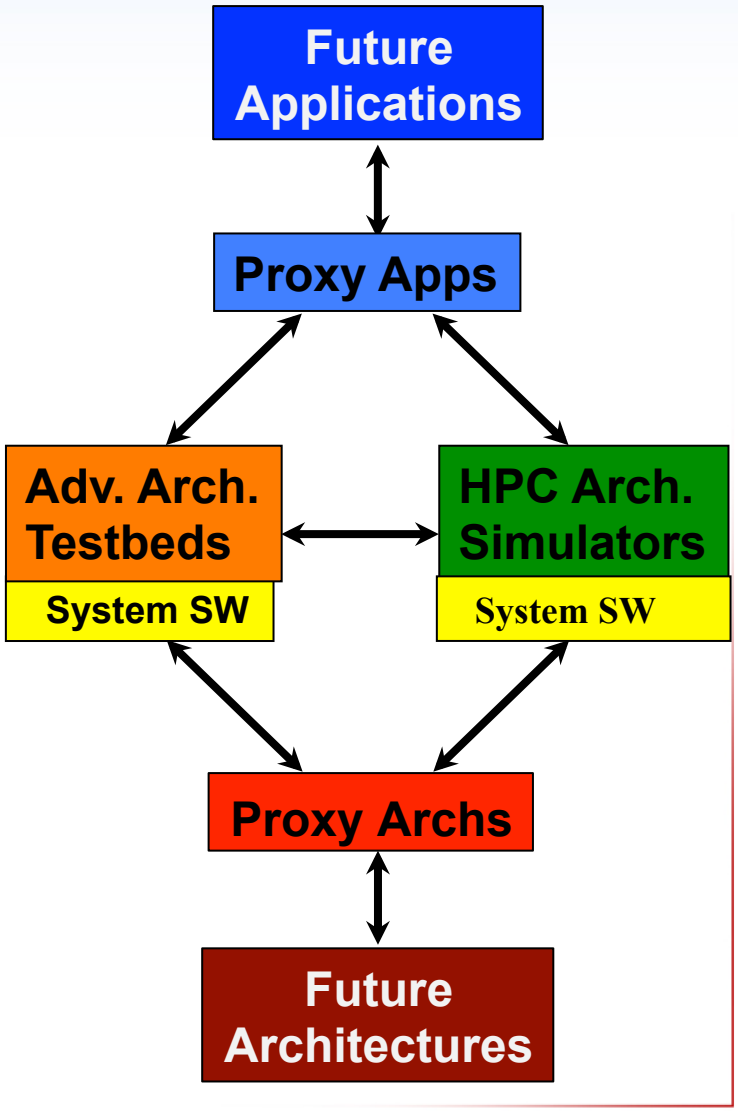
Strategic co-design capabilities

- Co-design Capability Development



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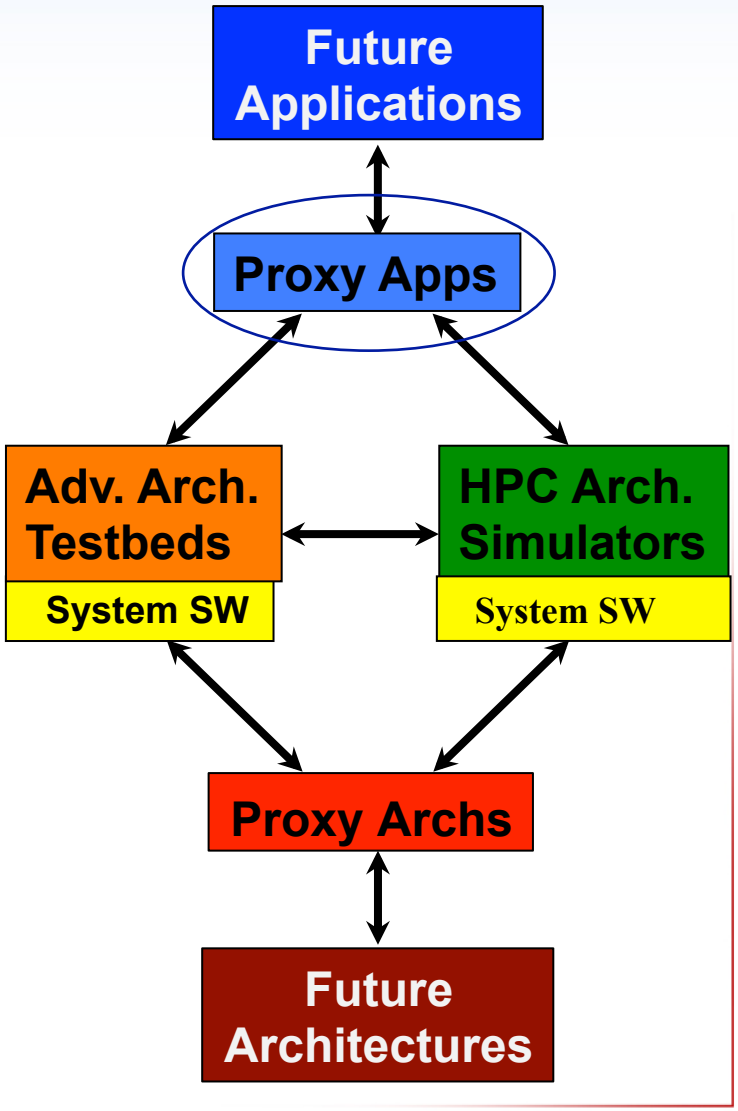

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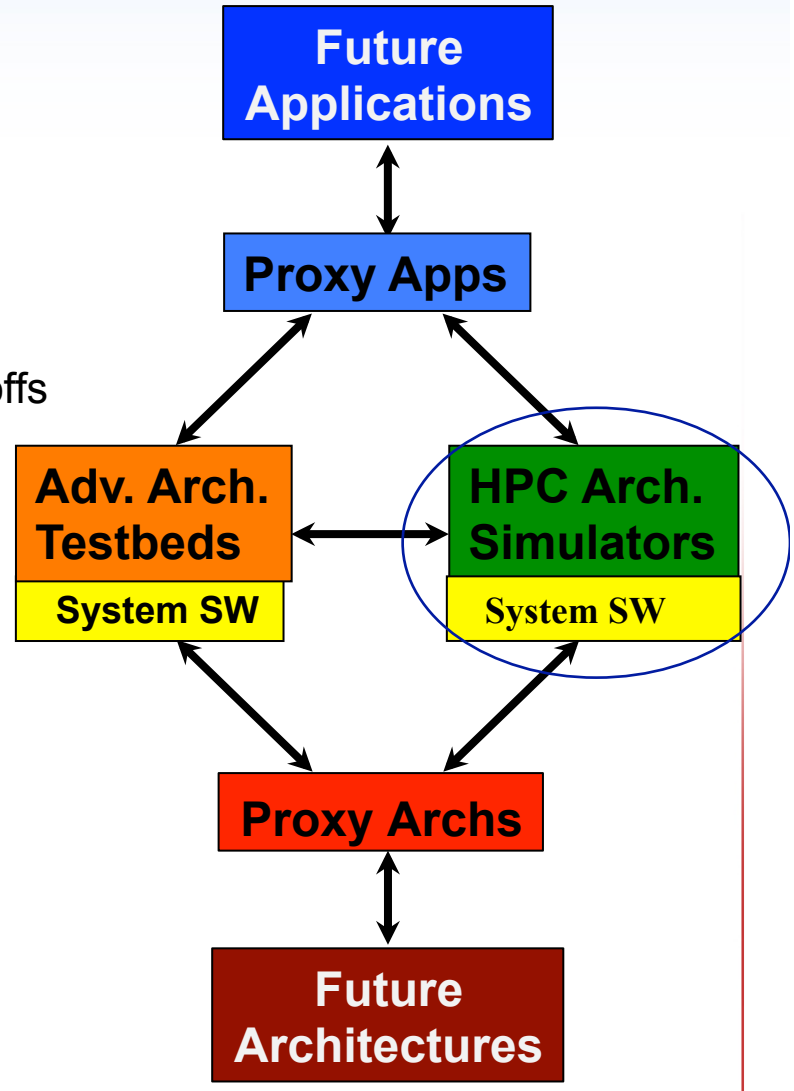

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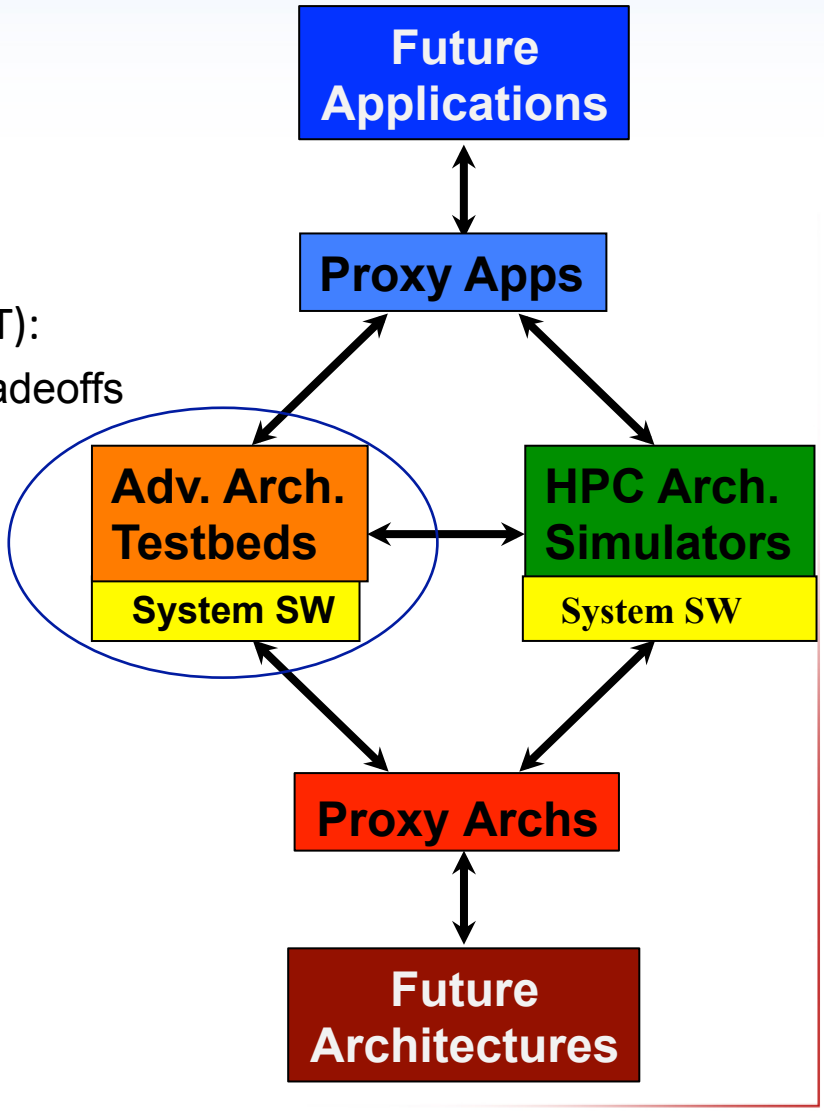

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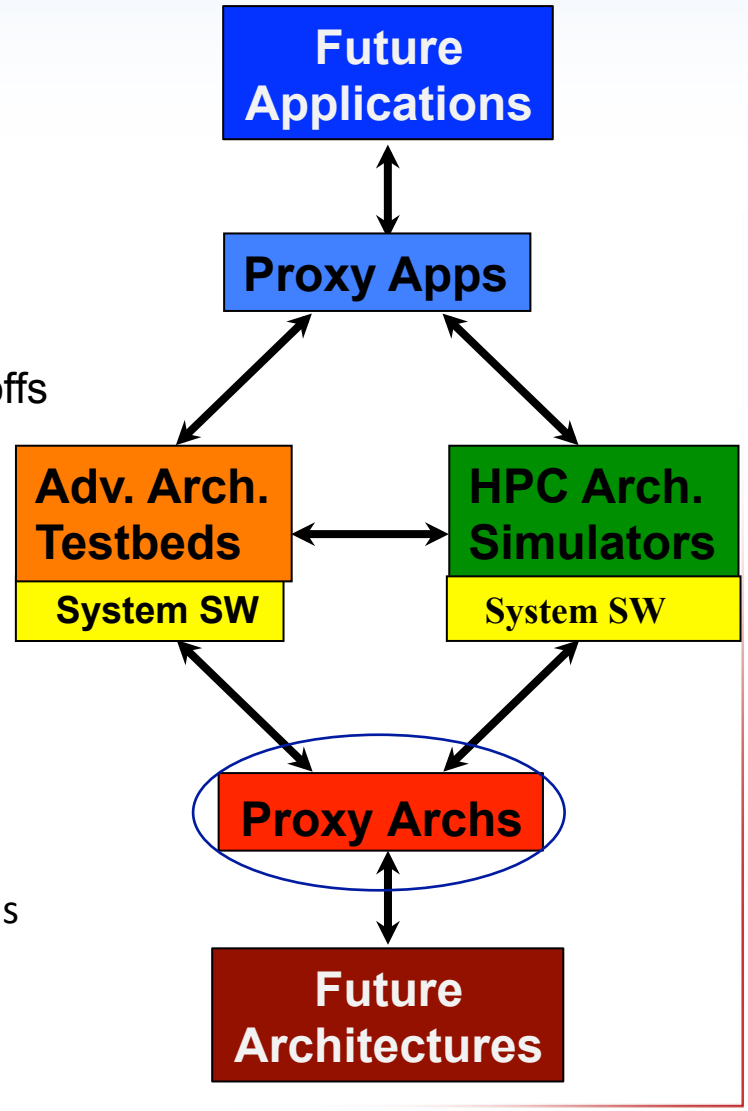
- Recent Co-design Accomplishments
  - Mantevo selected for R&D100 award
  - Co-leadership of Computer Arch Lab (w/ LBNL)
    - Published v1.1 report on Abstract Machine Models (AMM) and Proxy Architecture Definitions
    - http://crd.lbl.gov/assets/pubs_presos/CALAbstractMachineModelsv1.1.pdf



Co-Design Paths

- Reactive
  - Extend HPC Strategy of Integrating of COTS Computing Components into MPPs
  - With end of Dennard Scaling, this Strategy has become more difficult
  - Focus on Application, Algorithm, and System Software development
- Proactive
  - The ARM Eco-system offers the potential to influence the design of future COTS Computing Components
  - Use application code base as requirements for design of future COTS hardware

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